

CLAIMS

What is claimed is:

1. A method of affecting the conduction of electrical signals in cardiac tissue of a living being using an instrument extended through a portion of the vascular system of the living being to an entry situs located at or adjacent the cardiac tissue comprising the steps of:

(a) providing a flowable agent comprising a plurality of small particles;

(b) introducing said flowable agent through said instrument at said entry situs; and

(c) imparting a particle-moving force through said instrument to said particles, said particle-moving force being generated external to the living being to cause said particles to pass directly through contiguous tissue to target cardiac tissue located remotely from said entry situs, said particles passing through said contiguous tissue under the impetus of said particle-moving force without any mechanical means carrying said particles through said contiguous tissue, whereupon said particles directly enter said target cardiac tissue.

2. The method of Claim 1 additionally comprising the steps of:

(c) forming a plurality of channels in the wall of the myocardium at spaced locations from one another and in communication with the interior of the heart; and

(d) introducing said flowable agent into said channels.

3. The method of Claim 1 wherein at least some portion of at least some of said particles is formed of a material to cause the formation of lumens in communication with the being's arterial system.

4. The method of Claim 2 wherein said channels in the wall of the myocardium are created by the application of energy to the myocardium.

5. The method of Claim 1 additionally comprising the step of applying energy to the myocardium to treat the cardiac tissue.

6. The method of Claim 5 wherein the application of energy to the myocardium produces channels therein.

7. The method of Claim 5 wherein said energy is selected from the group consisting of one or more of mechanical, electrical, thermal, electromagnetic, vibratory, hydraulic, pneumatic,
5 and nuclear energy.

8. The method of Claim 2 additionally comprising applying a biologically active material to the myocardium to result in the production of said channels.

9. The method of Claim 1 additionally comprising the step of monitoring the cardiac cycle of the being and coordinating the introduction of said flowable agent with the cardiac cycle.

10. A method of affecting the conduction of nerve signals in cardiac tissue using an instrument extended through a portion of the vascular system of the living being to an entry situs located at or adjacent the cardiac tissue of a living being comprising the steps of:

(a) providing a flowable agent comprising a plurality of small particles;

(b) introducing said flowable agent through said instrument at said entry situs; and

15 (c) imparting a particle-moving force through said instrument to said particles, said particle-moving force being generated external to the living being to cause said particles to pass directly through contiguous tissue to target cardiac tissue located remotely from said entry situs, said particles passing through said contiguous tissue under the impetus of said particle-moving force without any mechanical means carrying said particles through said contiguous tissue,
20 whereupon said particles directly enter said target cardiac tissue.

11. The method of Claim 10 additionally comprising the steps of:

(c) forming a plurality of channels in the wall of the myocardium at spaced locations from one another and in communication with the interior of the heart; and

(d) introducing said flowable agent into said channels.

12. The method of Claim 10 wherein at least some portion of at least some of said particles is formed of a material to cause the formation of lumens in communication with the being's arterial system.

13. The method of Claim 10 wherein said channels in the wall of the myocardium are created by the application of energy to the myocardium.

14. The method of Claim 10 additionally comprising the step of applying energy to the myocardium to treat the cardiac tissue.

15. The method of Claim 14 wherein the application of energy to the myocardium produces channels therein.

16. The method of Claim 14 wherein said energy is selected from the group consisting of one or more of mechanical, electrical, thermal, electromagnetic, vibratory, hydraulic, pneumatic, and nuclear energy.

17. The method of Claim 11 additionally comprising applying a biologically active material to the myocardium to result in the production of said channels.

18. The method of Claim 10 additionally comprising the step of monitoring the cardiac cycle of the being and coordinating the introduction of said flowable agent with the cardiac cycle.

19. The system of Claim 1 wherein said particles are constructed so that once they are located within the tissue they tend to resist migration therefrom.

20. The system of Claim 19 wherein said particles are shaped to resist such migration.

21. A method of vascularizing cardiac tissue of a living being using an instrument extended through a portion of the vascular system of the living being to an entry situs located at or adjacent the cardiac tissue comprising the steps of:

(a) providing a flowable agent comprising a plurality of small particles;

(b) introducing said flowable agent through said instrument at said entry situs;

(c) imparting a particle-moving force through said instrument to said particles, said particle-moving force being generated external to the living being to cause said particles to pass directly through contiguous tissue to target cardiac tissue located remotely from said entry situs, said particles passing through said contiguous tissue under the impetus of said particle-moving force without any mechanical means carrying said particles through said contiguous tissue, whereupon said particles directly enter said target cardiac tissue;

(d) forming a plurality of channels in the wall of the myocardium at spaced locations from one another and in communication with the interior of the heart; and

(e) introducing said flowable agent into said channels.

22. The method of Claim 21 wherein said channels in the wall of the myocardium are created by the application of energy to the myocardium.

23. The method of Claim 21 additionally comprising applying a biologically active material to the myocardium to result in the production of said channels.